

To: Wetland Recovery Project Board of Governors
From: Wetlands Managers Group and Science Advisory Panel
Date: September 24, 2003
Re: Science Panel Membership

Summary of Recommended Actions

- Approve addition of Richard Zembal, and Drs. John Dixon and Martha Sutula

Each year the Science Advisory Panel reviews the technical expertise of its members and the SAP agenda for the coming year to determine if additional expertise is needed to accomplish its objectives. This year, the SAP recognized the need for additional expertise in riparian ecology and for a more active connection between the SAP and agencies involved in wetland restoration and management. As a result, the SAP recommends adding Richard Zembal, Natural Resources Director for the Orange County Water District who oversees a variety of ecological management activities in the Santa Ana River Watershed, and Dr. John Dixon, ecologist for the California Coastal Commission. In addition, the SAP recommends that Dr. Martha Sutula, WRP staff scientist, be made a formal member of the SAP.

The WMG has reviewed the qualifications of candidate members and joins the SAP in recommended that Drs. Richard Zembal, John Dixon, and Martha Sutula be added to the SAP. The list of SAP members is below and resumes of the three candidates are attached

- Richard Ambrose, University of California, Los Angeles
- John Callaway, University of San Francisco
- John Dixon, California Coastal Commission (candidate)
- Michael Horn, California State University, Fullerton
- Michael Josselyn, San Francisco State University
- Keith MacDonald, independent consultant
- Sharook Madon, CH2MHill
- Ken Schwarz, Jones & Stokes
- Eric Stein, Southern California Coastal Water Research Project
- Martha Sutula, Southern California Coastal Water Research Project (candidate)
- Stephen Weisberg, Southern California Coastal Water Research Project (Chair)
- Richard Zembal, Orange County Water District (candidate)

Richard L. Zembal
24821 Buckboard Lane
Laguna Hills, CA 92653
949 643-3097

Orange County Water District
10500 Ellis Avenue
Fountain Valley, California 92708
(714) 378-3213; Rzembal@ocwd.com

Born May 21, 1946
in Chicago, Illinois
Excellent Health
Married to Diane

EDUCATION

B. A. in Biology, pre-med, Loyola University, Los Angeles, 1968.
M. A. in Biology, California State University, Long Beach, 1977.
Community College Teaching Credentials held in Biology and Ecology.

EXPERIENCE

June 2000 to Present: Natural Resources Director for the Orange County Water District. I administer an endowment for ecological management activities in the Santa Ana River Watershed. I author and oversee NEPA and CEQA documents and help design wetland projects.

August 1997 to June 2000: Employed by U.S. Fish and Wildlife Service as **Science Coordinator** for the Salton Sea Project as a GS 13. I was the principal liaison with the other agencies. I authored a workshop proceedings on study needs at the Sea for which I received a "Star" and monetary Award. I coordinated an inventory of the birds of the Sea, to result in a book that I will coauthor after 2 years of monthly counts by 20 observers. I was also the principal Service contact for the Santa Ana River Watershed Program which I founded and the Research Coordinator for the Tijuana River National Estuarine Research Reserve under NOAA.

January 1998 to Present: Teach The Natural History of California at Saddleback College. Teach the habitats, living species, and their ecology to a few dozen students each semester emphasizing field trips.

1980 to August 1997: Employed by U.S. Fish and Wildlife Service; since May 17, 1992 as **Deputy Field Supervisor, Supervisory Fish and Wildlife Biologist**; I ran the daily operations of the Southern California office and its 60 employees; directly supervise as many as 23 employees and direct the operations of the Endangered Species, Multi-species, Consultations, Wetlands, Contaminants, and Federal Projects Programs; We implement the Endangered Species Act in compliance with NEPA and are advisory to lead agencies on CEQA and Clean Water Act issues. I am responsible for the budget too, \$3.9 million in FY 1994. My goals are for biological solutions that work on as large a scale as possible, for people too. Formerly I was **Federal Projects leader and Endangered Species specialist**; design, propose, and find funding for resource inventories, species studies, and resource management plans; solicit, organize projects of \$2,500 - \$1.5 million; conduct field operations; identification skills with Southern California flora and fauna; write, review, and edit reports including EISs and Biological Opinions; supervise 8 employees; frequent interaction with the public, diverse agencies, and organizations including evening and weekend presentations and tours.

1979 to present: **Investigate the life history of the endangered Light-footed Clapper Rail (Rallus longirostris levipes)**; Annual census of the U.S. population; nest monitoring; radio telemetry of rails and predators; trapping and banding; design and provision of artificial nesting rafts; restoration and management design and implementation; coastal wetland ecology; recently, translocation and captive propagation; annual reports; frequent presentations; publications.

1982 to 1990: **Endangered Species Recovery Teams Lead and Membership**; Appointed the recovery team chairperson for the combined Coastal Endangered Species Recovery Team for Southern California which deals with the California Least Tern (Sterna albifrons browni), Light-footed Clapper Rail, and saltmarsh bird's beak (Cordylanthus maritimus); currently team member of newly established West Coast Clapper Rail Recovery Team.

1984 to 1990: Ecology 100 evening **instructor at Golden West College**; 4.5 unit equivalents; Course title is Man and the Environment; enrollment of 100+ students each semester during the regular school year.

1970 to 1980: **Technical Assistant II at California State University, Long Beach, Biology Department**; Initially, I was the animal caretaker for the department; final 3 years, I ran the anatomy and physiology issue room including lab setup for classes, ordering supplies, repairing equipment, supervising graduate and student assistants, and presenting demonstrations to classes and tour groups.

March 1978 to November 1978: **Contractor and principal investigator for the Department of the Navy, Naval Weapons Center, China Lake, California**. I hired and directed 3 field assistants, mapped the vegetation, collected and identified 344 species of vascular plants, trapped 25 species of mammals, gathered data on distributions and population levels of plants and mammals over a several hundred acre area, and published results.

January 1978 to March 1978: **Contractor and principal investigator for the Bureau of Land Management, Bakersfield District**. I hired and directed two field assistants, generated habitat descriptions and population estimates of wintering birds on plots in 8 upper desert habitats. We identified 69 species of birds over a 126 square mile area near Little Lake, California. The 40 page contract report is no. CA-010-RFP-8-1.

May 1977 to October 1977: **Coauthored A Management Plan for the Natural Resources of Mugu Lagoon**, Ventura County, California; I collected and identified 222 species of vascular plants and generated an annotated checklist, mapped the vegetation, and assisted with other aspects of data collection for the Fish and Wildlife Service.

January 1976 to June 1976: **Participated in the formation of a development plan for Ronald Caspers Regional Park, Orange County, California**; consultant to Reynolds Environmental Group, Newport Beach, I co-authored "Vegetation and wildlife study of Ronald W. Caspers Regional Park", a 41-page inventory and analysis in riparian and coastal sage scrub habitats.

March 1976 to July 1976: Compiled an **inventory of 152 species of vascular plants from Madrona Marsh**; prepared a checklist, map of the vegetation, and report that were published by the city of Torrance, Parks and Recreation Department, funded by the Los Angeles chapter of the Audubon Society and Friends of Madrona Marsh.

August 1975 to September 1975: **Biologist at China Lake Naval Weapons Center**. I organized a team of 7 field scientists and took inventories of plants, birds, and mammals in upper desert habitat; assessed the effects of vehicular tracking on vegetation; our results were incorporated in the Bold Eagle 1976 report.

1974 to 1977: **Investigations for my Master's thesis** entitled "The feeding habits of the Chukar Partridge, Alectoris chukar, in the Argus and Coso Mountains of California" (77 pages). I examined plant food availability and selection by Chukar; 220 species of plants were identified from 132 crops.

HONORS AND AWARDS

Wilson Ornithological Society's Conservation Committee member with a small group of other Rallid experts. We issued a statement on the conservation and management of North American Rallids, presented it in August 1987 at the annual meetings along with invited papers (one by me), and published it in the Wilson Bulletin.

I chaired the session on endangered species at the 1983 meetings of the western section of the Wildlife Society and was awarded second place for the Nelson-Hooper Award competition for my presentation on Clapper Rails. I won the award for best technical presentation at the 1992 Western Section Meeting of The Wildlife Society.

I received a monetary and Special Achievement Award from the Fish and Wildlife Service for my work on the Santa Margarita River Project in 1983 and each year since 1987 for my work on a variety of projects and annually for overall performance since becoming a supervisor in 1990.

PUBLICATIONS

- Mispagel, M. E., and R. Zembal. 1976. Effects of military maneuvers on Mohave Desert vegetation. So. Cal. Academy of Sciences, Abstracts of Annual Meetings. 44 pp.
- Zembal, R. 1976. Vascular plants of Madrona Marsh In Madrona Marsh Wildlife Habitat Study. Spec. Public., City of Torrance, Calif. 16pp.
- Zembal, R., C. Gall, D. Kruska, and P. Lobnitz. 1979. An inventory of the vascular plants and small mammals of the Coso Hot Springs Area of Inyo County, California. Naval Weapons Center, China Lake, Calif. Admin. Public. no. 202. 154pp.
- Zembal, R., and C. Gall. 1980. Observations on Mohave Ground Squirrels, Spermophilus mohavensis, in Inyo County, California. Jour. Mammal. 61(2): 347 - 350.
- Zembal, R., and B. W. Massey. 1981. A census of the Light-footed Clapper Rail in California. West. Birds 12: 87 - 99.
- _____. 1983. The Light-footed Clapper Rail: distribution, nesting strategies, and management. Cal-Neva Wildlife Trans. 1983: 97 - 103.
- _____. 1983. To catch a Clapper Rail -- twice. No. American Bird Bander 8: 144 - 148.
- Massey, B. W., R. Zembal, and P. D. Jorgensen. 1984. Nesting habitat of the Light-footed Clapper Rail in Southern California. J. Field Ornith. 55(1): 67 - 80.
- Zembal, R., and K. J. Kramer. 1984. The known limited distribution and unknown future of Santa Ana River Woolly-star (*Eriastrum*). Crossosoma 10(5): 1-8.
- Zembal, R., and B. W. Massey. 1985. Function of a rail "mystery" call. Auk 102(1): 179 - 180.
- _____. 1985. Distribution of the Light-footed Clapper Rail in California, 1980 - 1984. Amer. Birds 39(2): 135 - 137.
- Zembal, R., J. M. Fancher, C. S. Nordby, and R. J. Bransfield. 1985. Intermarsh movements by Light-footed Clapper Rails indicated in part through regular censusing. Calif. Fish and Game 71(3): 164 - 171.
- Zembal, R., and K. J. Kramer. 1985. The status of the Santa Ana River Woolly-star. Fremontia 13(3): 19 - 20.
- Massey, B. W., and R. Zembal. 1987. Vocalizations of the Light-footed Clapper Rail. J. Field Ornith. 58(1): 32 - 40.
- Zembal, R., and B. W. Massey. 1987. Seasonality of vocalizations by Light-footed Clapper Rails. J. Field Ornith. 58(1): 41 - 48.
- Eddleman, W.R., F.L. Knopf, B. Meanly, F.A. Reid, and R. Zembal. 1988. Conservation of North American Rallids. Wilson Bull. 100(3): 458-475.
- Zembal R., and J.M. Fancher. 1988. Foraging behavior and foods of the Light-footed Clapper Rail. Condor 90: 959-962.
- Zembal R., K.J. Kramer, R.J. Bransfield, and N. Gilbert. 1988. A survey of Belding's Savannah Sparrows in California. Amer. Birds 42(5): 1233-1236.
- Zembal, R., B. W. Massey, and J. M. Fancher. 1989. Movements and activity patterns of the Light-footed Clapper Rail. J. Wildl. Manage. 53(1):39-42.

- Wiley, J.W., and R. Zembal. 1989. Concern grows for Light-footed Clapper Rail. Fish and Wildlife Service, Endangered Spp. Tech. Bull. 14(3): 6-7.
- Foerster, K.S., and R. Zembal. 1990. Sabertooth cat, California grizzly, clapper rail? Tideline, San Francisco Bay NWR, Spring Issue, page 1.
- Zembal, R. 1990. Riparian habitat and breeding birds along the Santa Margarita and Santa Ana Rivers of Southern California. In Endangered Plant Communities of Southern California, Special Publ. No 3, Southern CA Botanists, pp. 98 - 114.
- Zembal, R. 1991. The Light-footed Clapper Rail, secretive denizen of the lower marsh shadows. Western Tanager 57(8): 1-3.
- Zembal, R. 1993. Status and management of Light-footed Clapper Rails in coastal southern California. 1992 Transactions, West. Sect. Wildl. Soc. 28: 1-5.
- Zembal, R. 1993. The need for corridors between coastal wetlands and uplands in southern California, in Jon Keeley, ed., Interface between ecology and land development in California, So. CA Academy of Sciences, pp. 205-208.
- Zembal, R., and S. Hoffman. In Review. Predators of the Light-footed Clapper Rail. J. Wildl. Mgt.
- Massey, B.M. and R. Zembal. 2002. Guide to Birds of the Salton Sea. Arizona-Sonora Desert Museum. 300 pp.

I started breeding bird censuses and winter bird studies in 1974 and usually published the results in the journal American Birds.

Breeding Bird Censuses

Completed alone or participated as organizer and chief observer in 14 studies in different habitat types including: Joshua tree-black bush-bladder sage association. 1974. 28(6): 1043; Creekside willow woodland. 1982. 36(1): 87-88; Palo verde-cheesebush-chuparosa desert wash. 1982. 36(1): 95-96; Narrow creekside mixed riparian woodland. 1984. 38(1):101-102; Willow woodland with dense riparian understory. 1984. 38(1):106-107; Chaparral with canyon-bottom woodland. 1984. 38(1): 117 - 118; Coastal sage scrub - live oaks. 1984. 38(1): 118.

Winter Bird Counts

Completed 16 studies as principal observer or alone and another 12 as organizer and compiler in a variety of habitats including: Disturbed coastal salt marsh. 1974. 28(3): 721; Creosotebush scrub on southern Sierra alluvium. 1979. 33(1): 32; Saltbush scrub. 1979. 33(1): 32-33; Creosotebush scrub. 1979. 33(1): 33; Joshua tree woodland. 1979. 33(1): 33-34; High desert spring. 1979. 33(1): 34.

Desert scrub. 1979. 33(1): 34; High desert hot springs. 1979. 33(1): 34 - 35;

High desert reservoir and shoreline. 1979. 33(1): 35; Creekside willow woodland. 1982. 36(1): 37-38; Desert floodplain. 1982. 36(1): 40; Palo verde-chuparosa desert wash. 1982. 36(1): 40-41; Narrow creekside band of mixed riparian woodland. 1984. 36(1): 48; Willow woodland with open ponded water. 1984. 38(1): 51-52; Coastal sage scrub with scattered live oaks. 1984. 38(1): 52; Chaparral with a narrow band of canyon-bottom woodland. 1984. 38(1): 52-53.

John Douglas Dixon

**Curriculum Vitae
May 2003**

EDUCATION

Ph.D., Ecology, University of California, Santa Barbara	1978
M. S., Zoology, University of Hawaii at Manoa	1973
B. A., History, Arizona State University	1964

POSITIONS HELD

Ecologist (Environmental Program Manager I) California Coastal Commission	1997 - present
Associate Research Biologist Marine Science Institute, University of California at Santa Barbara	1996 - present
Adjunct Associate Professor Department of Biology, San Diego State University	1989 - 2000
Ecologist and Partner Ecometrics, Carlsbad, California	1987 - 1998
Research Assistant Professor Department of Biological Sciences, University of Southern California	1985 - 1987
Allan Hancock Foundation Fellow and Research Associate Department of Biological Sciences, University of Southern California	1978 - 1985

GRANTS AND AWARDS

Contracts with the California Department of Fish and Game to study the temporal and spatial dynamics of sea urchin recruitment in California. Co-principal investigator with Dr. Stephen Schroeter at UCSB	2000 - 2004
Contract with the National Marine Fisheries Service to evaluate the sustainability of the sea cucumber fishery in California. Co-principal investigator with Dr. Dan Reed and Dr. Stephen Schroeter at UCSB.	1998 - 2000
Contract with the Minerals Management Service for studies of environmental impact assessment techniques. Co-principal investigator with Dr. Allan Stewart-Oaten and Dr. Stephen Schroeter at UCSB.	1998 - 2000
Various contracts in different years with the California Dept. of Fish & Game, the Alaska Dept. of Fish & Game, the Pacific States Marine Fisheries Commission, the California Sea Grant, and the National Science Foundation for studies of the population dynamics of red sea urchins. Co-principal investigator with Dr. Stephen Schroeter and Dr. Thomas Ebert at SDSU.	1990 - 2000
Faculty Research Incentive Grants, University of Southern California	1985 - 1987
Contracts with the Marine Review Committee, Inc. for studies of benthic and epiphytic invertebrates in kelp beds near the San Onofre Nuclear Generating Station. Co-principal Investigator with Dr. Stephen Schroeter.	1982 - 1987

Contracts with the Marine Review Committee, Inc. for studies of benthic and epiphytic invertebrates in kelp beds near the San Onofre Nuclear Generating Station. Co-investigator with Drs. Jon Kastendiek and Stephen Schroeter.	1980 - 1982
NSF Grant for Improving Doctoral Dissertations	1976 - 1978
Ford Foundation Fellowship	1975
Sea-Grant Traineeship	1974 - 1975

THESES

- Dixon, J. D. 1973. Natural history of a small insular population of rabbits, *Oryctolagus cuniculus*, in Hawaii. M.S. thesis. University of Hawaii at Manoa.
- Dixon, J. D. 1978. Determinants of the local distribution of four closely-related species of herbivorous marine snails. Ph.D. dissertation. University of California at Santa Barbara.

PUBLICATIONS

2003. Page, H.M., S. Schroeter, D. Reed, R.F. Ambrose, J. Callaway, and J. Dixon. An inexpensive method to identify the elevation of tidally inundated habitat in coastal wetlands. Bulletin of the Southern California Academy of Sciences. In Press.
2002. Andrew, N.L and others, including J. Dixon. Status and management of world sea urchin fisheries. Oceanography and Marine Biology: An Annual Review. 40:343-425.
2001. Dixon, J.D. Changing Course: A Guide from California (review of J. B. Zedler, ed. 2001. Handbook for Restoring Tidal Wetlands. CRC Press, Boca Raton, FL., 439 pp.). Coastal Management 29:353-355
1999. Ebert, T.A., J.D. Dixon, S.C. Schroeter, P.E. Kalvass, N.T. Richmond, W.A. Bradbury, and D.A. Woodby. Growth and mortality of red sea urchins *Strongylocentrotus franciscanus* across a latitudinal gradient. Marine Ecology Progress Series 190:189-209.
1998. Schroeter, S., J.D. Dixon, and R.O. Smith. Using PROC VARCLUS® to examine geographical patterns in biological time series data along the California Coast. Proceedings of the 6th Annual Western Users of SAS® Software Regional Users Group Conference. pp. 173-176.
1996. Schroeter, S.C., J.D. Dixon, T.A. Ebert, and J.V. Rankin. The effects of kelp forests (*Macrocystis pyrifera*) on the larval distribution and settlement of red and purple sea urchins (*Strongylocentrotus franciscanus* and *S. purpuratus*). Marine Ecology Progress Series 133:125-134
1995. Schroeter, S.C., T.A. Dean, K. Theis, and J.D. Dixon. Effects of shading by adults on the growth of blade-stage *Macrocystis pyrifera* (Phaeophyta) during and after the 1982-1984 El Niño. Journal of Phycology 31:697-702.
1994. Ebert, T.A., S.C. Schroeter, J.D. Dixon, and P. Kalvass. Settlement patterns of red and purple sea urchins (*Strongylocentrotus franciscanus* and *S. purpuratus*) in California, USA. Marine Ecology Progress Series 111:41-52.
1993. Ebert, T.A., S.C. Schroeter, and J.D. Dixon. Inferring demographic processes from size-frequency distributions: The effect of pulsed recruitment on simple models. Fishery Bulletin 91:237-241.
1993. Schroeter, S.C., J.D. Dixon, J. Kastendiek, R.O. Smith, and J.R. Bence. Detecting the ecological effects of environmental impacts: a case study of kelp forest invertebrates. Ecological Applications 3:331-350.

1993. Thompson, B., J. Dixon, S. Schroeter, and D.J. Riese. Chapter 8. Benthic invertebrates. Pages 369-458 In M. Dailey, J. Anderson, and D.J. Riese, eds. The Ecology of the Southern California Bight. University of California Press, Los Angeles and Berkeley. 926 pages
1992. Zabloudil, K., J. Reitzel, S. Schroeter, J. Dixon, T. Dean, and T. Norall. Sonar mapping of Giant Kelp Density and Distribution. In: O.T. Magoon, H. Converse, V. Tippie, L.T. Tobin, and D. Clark, eds. Coastal Zone '91. pp. 391-406.
1991. Lissner, A.L., G.L. Taghon, D.R. Diener, S.C. Schroeter, and J.D. Dixon. Recolonization of deep-water hard substrate communities: potential impacts from oil and gas development. *Ecological Applications* 1:258-267.
1984. Dean, T.A., S.C. Schroeter, and J.D. Dixon. Effects of grazing by two species of sea urchins (*Strongylocentrotus franciscanus* and *Lytechinus anamesus*) on recruitment and survival of two species of kelp (*Macrocystis pyrifera* and *Pterygophora californica*). *Marine Biology* 78:301-313.
1984. Oberndorfer, R.Y., J.V. McArthur, J.R. Barnes, and J. Dixon. The effect of invertebrate predators on leaf litter processing in an alpine stream. *Ecology* 65:1325-1331.
1983. Schroeter, S.C., J. Dixon, and J. Kastendiek. Effects of the starfish *Patiria miniata* on the distribution of the sea urchin *Lytechinus anamesus* in a southern California kelp forest. *Oecologia* 56:141-147.
1981. Dixon, J. Evidence of gregarious settlement in the larvae of the marine snail *Collisella strigatella* (Carpenter). *Veliger* 24:181-184
1981. Dixon, J., S.C. Schroeter, and J. Kastendiek. Effects of the encrusting bryozoan, *Membranipora membranacea*, on the loss of blades and fronds by the giant kelp, *Macrocystis pyrifera* (Laminariales). *Journal of Phycology* 17:341-345.
1981. Kastendiek, J., S.C. Schroeter, and J. Dixon. The effect of the seawater cooling system of a nuclear generating station on the growth of mussels in experimental populations. *Marine Pollution Bulletin* 12:402-407.
1981. Sih, A. and J. Dixon. Tests of some predictions from the MacArthur-Levins competition models: a critique. *American Naturalist* 117:550-559.

COMPLETED MANUSCRIPTS

- Dixon, J.D., S.C. Schroeter, C.M. Tyler, F.T. Sproul, and V.E. Coleman. Postfire spatial variation in coastal sage scrub and chaparral: Effects on statistical inference.
- Dixon, J.D., S.C. Schroeter, C.M. Tyler, V.E. Coleman, and F.T. Sproul. Patterns of resprouting and seedling establishment after fire in chaparral and coastal sage scrub.

SELECTED TECHNICAL REPORTS

- Bence, J., S.C. Schroeter, J.D. Dixon, and T.A. Dean. 1989. Final Technical Report to the California Coastal Commission: K. Giant Kelp. . A report from the Marine Review Committee.
- Dixon, J.D., S.C. Schroeter, and R.O. Smith. 1988. Studies of benthic organisms in kelp forests near the San Onofre Nuclear Generating Station. 1980 - 1986. Final Report to the Marine Review Committee, Inc. dated March 10, 1988. 289 pp.
- Kastendiek, J. and J.D. Dixon. 1989. Final Technical Report to the California Coastal Commission: G. Mysids. A report from the Marine Review Committee.

Schroeter, S.C., J.D. Dixon, and T.A. Dean. 1988. Effects of the operation of SONGS Units 2 and 3 on patterns of kelp recruitment in the San Onofre kelp forest. Final Report to the Marine Review Committee, Inc. dated February 16, 1988. 243 pp.

Schroeter, S.C., J.D. Dixon, and R.O. Smith. 1994. Evaluation of the sampling design for the kelp forest monitoring program, Channel Islands National Park. Vol. I, II, III, IV. A report to the National Park Service dated December 5, 1994.

SELECTED PROFESSIONAL ACTIVITIES

Invited panelist, California Sea Grant workshop to plan a research agenda for sea urchin studies, Scripps Institution of Oceanography. 1992

Invited speaker and panelist, California Sea Grant, Sea Urchin, Kelp, Abalone Conference, Bodega Marine Lab. 1992

Invited panelist, Channel Islands National Park workshop on kelp forest monitoring, University of California, Santa Barbara. 1995.

Instructor, "Ecological Assessment Methods." Extension Division, University of California, San Diego. 1996, 1997.

Invited speaker, California Sea Grant, Sea Urchin Workshop, Santa Barbara, 1999.

Instructor, "Wetland Delineation in California." 2-day class presented to CCC Staff, 1999. Co-instructor: Dr. Terry Huffman

PROFESSIONAL ASSOCIATIONS

Ecological Society of America

California Native Plant Society

SPECIALIZED WETLAND TRAINING

<u>Class</u>	<u>Instructors</u>	<u>Dates</u>	<u>Sponsor</u>
Wetland Delineation	Dr. Terry Huffman; Mr. Dan Martel (USACOE.)	09/29 – 10/02/98	U.C. Berkeley Extension
Aquatic Plants	Dr. Barbara Ertter	10/24 – 10/25/98	U.C.B. Jepson Herbarium
Carex (predominantly wetland genus)	Dr. Dan Norris	07/16 – 07/18/99	U.C.B. Jepson Herbarium
Juncaceae (predominantly wetland family)	Dr. Barbara Ertter	07/21 – 07/23/01	U.C.B. Jepson Herbarium
Poaceae (grasses including wetland species)	Dr. Travis Columbus	05/05 – 05/06/01	U.C.B. Jepson Herbarium
Applied Hydric Soils	Mr. Charlie Newling Mr. Phil Scoles	03/25 – 3/27/02	Wetland Training Institute
U.S. Army Corps of Engineers Regulatory IV – Interagency Wetlands Identification & Delineation	Mr. Jim Wakeley, USACOE Mr. Ken Oster, NRCS Mr. Rob Leidy, USEPA Mr. Carl Wishner, Envicom	05/06 – 05/10/02	U.S. Army Corp of Engineers

Curriculum Vitae
Martha A. Sutula, Ph.D.

EDUCATION:

Ph.D., Coastal Ecology, Louisiana State University, 1999
M.S., Public Health, Tulane Univ. School of Public Health & Tropical Medicine, 1994
B.S. Chemistry, Purdue University

PROFESSIONAL EXPERIENCE:

Wetlands and Watershed Ecologist, Southern California Coastal Water Research Project.
Westminster, California, 2001 - present

Post-doctoral Research Associate, Tulane University Institute of Earth and Ecosystem Sciences,
New Orleans, Louisiana, 1999 - 2001

Research Assistant, Louisiana State University Department of Oceanography and Coastal
Sciences, Baton Rouge, Louisiana, 1995 - 1999

Research Assistant, Tulane University School of Public Health and Tropical Medicine, New
Orleans, Louisiana, 1993 - 1994

Project Manager, U.S. Environmental Protection Agency, Office of Pollution Prevention and
Toxics, Risk Management Division, Washington DC, 1991 – 1993

Aquaculture Extension Agent, U.S. Peace Corps, Bandundu, Zaire, 1987-1991

HONORS, AWARDS, AND PROFESSIONAL MEMBERSHIPS:

- Sigma Xi Scientific Honor Society member 1999
- Gulf Estuarine Research Society Conference-Best Student Paper Award 1998
- Chancellor's Fellowship for Doctoral Studies, Louisiana State Univ., 1995.
- Phi Beta Kappa member 1986.
- Chemical Industrial Society of Illinois Scholarship 1986 (for outstanding Junior in Chemistry)
- Vice-President, Marine Environmental Researchers, LSU, May 1996 - 1997
- Member, Estuarine Research Federation
- Member, American Society of Limnology and Oceanography

CURRENT RESEARCH GRANTS

US EPA 2002-2005, Development of a Regional Monitoring Program for Southern California Wetlands and Riparian Resources- \$400,000

NOAA Coastal Services Center 2002-2004, Decision Support for Prioritizing Recovery of Southern California Riparian Ecosystems- \$105,000.

US Geological Survey Gap Analysis Program 2002-2004, Methodology Development for Mapping of Southern California Riparian Areas - \$50,000

California State Regional Water Quality Control Board, Region 4, 2002-2004, Sediments as a Source of Nutrients in Malibu Lagoon, Los Angeles County, \$105,000

California State Regional Water Quality Control Board, Region 9, 2003-2005, Sediments as a Nonpoint Source of Nutrients in Upper Newport Bay, Orange County, \$313,000

California State Regional Water Quality Control Board, Region 9, 2003-2004, Trace Metals and Organochlorines in the Food Web of Upper Newport Bay, Orange County, \$34,200

PUBLICATIONS

Sutula M. and Stein E. 2003 Habitat Value of Natural and Constructed Wetlands Used to Treat Urban Runoff: A Literature Review. Southern California Coastal Water Research Project Technical Report #388, July 2003.

Sutula M., Ambrose R., Callaway J., Ferren W., Horn M., Josselyn M., Madon S., Macdonald K., Schwarz K., Stein E., and Weisberg S. 2002. Improving regional planning of wetland ecosystem restoration and management: WRP Science Panel Recommendations. Report prepared for Southern California Wetland Recovery Project Governing Board, May 2002.

Sutula M., Day, J., and Cable, J. 2001. Hydrological and nutrient budgets of freshwater and estuarine wetlands of Taylor Slough in Southern Everglades, Florida (USA). *Biogeochemistry* 56:287-310

Sutula M., Perez B., Reyes E., Day J.W., Jr., and Childers, D. In press. Spatio-temporal variability in material exchange between the Southeastern Everglades Wetlands and Florida Bay, *Estuarine, Coastal, and Shelf Science*

Mitra S., Bianchi T., McKee B., and Sutula M. 2002. Black Carbon in the Mississippi River: Quantities and sources. *Environmental Science and Technology*, Vol. 11(1), 2296-2302.

Sutula M., Bianchi T. and McKee B. *In Press*. Effect of seasonal sediment storage and diagenesis in the lower Mississippi River on bio-availability of particulate phosphorus flux to Gulf of Mexico. *Limnology and Oceanography*

Sutula M., Reyes E., and Day J.W., Jr. *In review*. Modeling nutrient cycling in the surface waters of the southern Everglades mangrove wetlands *Ecological Modelling*.

Schiff K. and Sutula M. In review. Organophosphorus pesticides in stormwater runoff from Southern California watersheds. *Water Resources Management*

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